

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Edition of 8 Oct 2002

The purpose of this document is to provide a synopsis of the impact of current USMC C2 POM 04 submissions in terms of improved capabilities and associated costs as compared to the following:

1. ***Quadrennial Defense Review (QDR) Operational Goals**
2. ****Joint Warfighting Priorities:** This listing was derived from several DPG-related sources by the Information Superiority Joint Warfighting Capability Assessment (IS JWCA). Page 10 of the IS JWCA's Brief of 12 August 02 entitled "Joint Force Command and Control: Capability Improvement Decision Briefing" pertains.

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***QDR Operational Goals:**

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****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
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***QDR Operational Goals:**

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Program: 350299--COMMON AVIATION COMMAND AND CONTROL SYSTEM (CAC2S)

System Description: CAC2S will provide a complete and coordinated modernization effort for the equipment of the MACCS to support its employment in future battlefield environments. CAC2S will eliminate the current dissimilar aviation Command & Control systems, and will add capability for aviation combat direction and air defense functions. CAC2S will be comprised of standardized tactical facilities, hardware, software and will significantly reduce the physical size and logistical footprint of existing MACCS equipment suites. CAC2S will be an open architecture system.

***QDR Operational Goal(s):** 1, 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$403.75M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	0	0	0	2345	6753	7640
OMMCR	0	0	0	0	0	750	1745	2538
PMC	0	0	0	0	4000	40145	42783	42910
RDTEMC	9517	56553	63475	71773	29586	65942	12333	9027

IS JWCA Recommended Capability: FIOP Task 2

Joint Program: No

Joint Relevance: CAC2S is a Joint interoperable system based on common hardware and software that provides improvements to red force tracking, blue force tracking, aviation planning, and the employment of fires.

IOC: FY06

FOC: FY08

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Program: 360204—COMMUNICATION EMITTER SENSING AND ATTACKING SYSTEM (CESAS)

System Description: The Communication Emitter Sensing and Attacking System will provide the capability to effectively sense/detect and attack through the use of electromagnetic or directed energy, the enemy's communication systems in support of the commander's Command and Control Warfare plan. The system will be a replacement for the existing AN/ULQ-19 and will assume the mission of sensing and denying the enemy the use of the electromagnetic spectrum and thereby disrupting his command and control system.

***QDR Operational Goal(s):** 3, 4

****Joint Warfighting Priorities:** 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$19.405 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	0	383	980	1212	824	988
PMC	0	0	0	1000	4323	4210	500	1422
RDTEMC	0	0	0	1250	1110	600	150	453

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES

Joint Program: No

Joint Relevance: Blue Force Tracking, Red Force Tracking, Fires

IOC: FY04

FOC: FY06

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**Program: 321700—COMPOSITE TRACKING NETWORK/COOPERATIVE ENGAGEMENT
CAPABILITY (CTN/CEC)**

System Description: The CEC system is an adaptation of the U.S. Navy's CEC Cooperative Engagement Transmission Processing Set (CETPS), designed to meet the USMC's CEC requirement. CEC will provide a sensor networking capability that will allow the USMC to participate in a cooperative engagement environment. It will be able to receive, generate, and distribute composite sensor data to command and control (C2) and weapon platforms. The system will be comprised of durable, scaleable, and modular components that meet the expeditionary operational requirements of the Marine Corps.

***QDR Operational Goal(s):** 3, 4, 5 6

****Joint Warfighting Priorities:** 1, 2 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$242.73 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	0	2673	4770	4846	5637	6372
OMMCR	0	0	0	1243	1280	1298	1500	1687
PMC	0	0	0	8673	23424	35879	45219	70945
RDTEMC	2610	12003	9875	6676	6642	1521	1525	1045

IS JWCA RECOMMENDED CAPABILITY: SIAP, GCCS

Joint Program: No

Joint Relevance: Provides inputs to Common Aviation Command & Control System (CAC2S) that are then distributed to the MAGTF and directs fighter, attack, and assault support aircraft to required locations (Red Force Tracking, Blue Force Tracking, Fires). Distributes the single integrated air picture (SIAP) to the MAGTF.

IOC: FY06

FOC: FY10

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Program: 111304--DEFENSE ADVANCED GPS RECEIVER (DAGR)

System Description: The DAGR will provide authorized DoD, Federal Civilian and Foreign Military Sales (FMS) users of GPS User Equipment (UE) a palm-held, dual-frequency (L1/L2), Selective Availability Anti-Spoofing Module (SAASM) based, Precise Positioning Service (PPS) receiver as a replacement to the PLGR. DAGR will provide real time position, velocity, navigation and timing (PVNT) data in a stand-alone receiver. The DAGR will be employed by infantry Marines down to the squad level in order to enhance the conduct of reduced-visibility, over-the-horizon air assault and surface insertions by Marine Expeditionary Units (MEUs) and other small units conducting raids, patrols, and military operations in urban terrain (MOUT).

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 2

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$13.744 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC							306	500
OMMCR	0	0	0	0	0	0	33	84
PMC			0	0	0	0	10627	2194

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: The Defense Advanced GPS Receiver will be employed by infantry Marines down to the to the squad level in order to enhance the conduct of reduced-visibility, over-the-horizon air assault and surface insertions by Marine Expeditionary Units (MEUs) and other small units.

IOC: FY04

FOC: FY05

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Program: 118498--DEFENSE MESSAGE SYSTEM (DMS)

System Description: DMS is a flexible COTS-based, network centric, application layer system which provides multi-media messaging and directory services capable of taking advantage of the DII network and security services (High Grade Service PKI). DMS has been designed as the Command and Control (C2) messaging system for the DoD CINCs/Services/Agencies (C/S/A) by ASD (C3I). DMS handles information for all classifications levels (unclassified – TS/SCI), compartments, and handling instructions. DMS has been fielded to 20 GENSER strategic/garrison locations at former AUTODIN communications centers. It will be fielded to 14 TS/SCI strategic/garrison former AUTODIN Sensitive Compartmented Information Facilities (SCIFs). DMS is influenced by industry developed COTS products. The Marine Corps specific acquisition strategy for this period will be developed in conjunction with joint DMS PMO WIPTs in support of DMS 4.0 implementation.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$38.538 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC		0	800	1272	1298	1107	1136	1164
PMC	0	3974	7753	8266	2956	436	9088	454
RDTE	0	0	400	462	471	481	492	502

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: DMS has been designed as the Command and Control (C2) messaging system for the DoD CINCs/Services/Agencies (C/S/A) by ASD (C3I). DMS handles information for all classifications levels (unclassified – TS/SCI), compartments, and handling instructions. The overall DMS Program is ACAT I and managed by DISA.

IOC: FY97

FOC: FY03

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Program: 110704--FIRST IN COMMAND AND CONTROL SYSTEM (FICCS)

System Description: FICCS is a mobile, expeditionary, and integrated first in command and controlsystem in support of the MAGTF's current JTF Enabler (JTFE) mission, or other missions in support of Joint, Coalition, and Interagency organizations operating with Marine Forces. The Joint Enhanced Core Communications System (JECCS) facilitates command and control for the MAGTF commander by providing "first in" capability such as accessing Standardized Tactical Entry Point (STEP) Defense Information System (DISN) services. FICCS will use an evolutionary acquisition strategy with the Block I variant consisting of the initial three JECCS systems. These systems are to be fielded during FY-03. Using the ONR S&T effort and the ELB ACTD (Wireless) efforts, FICCS Block II will consist of six (6) JECCS production units and nine (9) Interim Operational Facilities, which will include emerging hardware/software upgrades.

***QDR Operational Goal(s):** 2, 3, 6

****Joint Warfighting Priorities:** 1, 2, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$63.310 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC			314	1006	1400	1886	1225	301
PMC			10105	11830	17824	3390	1736	975
RDTE	0	0	4328	1191	1069	1117	1661	1952

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: FICCS is a mobile, expeditionary, and integrated first in command and controlsystem in support of the MAGTF's current JTF Enabler (JTFE) mission, or other missions in support of Joint, Coalition, and Interagency organizations operating with Marine Forces. Provides interoperability with Joint data networks and connectivity to NIPRNET/SIPRNET/DSN. JTA/DIICOE compliant.

IOC: FY03

FOC: N/A—Only 3 of the 11 systems required are funded

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Program: 122302—INTELLIGENCE SYSTEM READINESS (ISR)

System Description: The Intelligence Systems Readiness initiative seeks to modernize and support equipment and systems that were primarily obtained from alternate sources and were not acquired through the DOD 5000 acquisition process. These 'non-traditional' items all process and/or host classified software and data and are primarily located within the Radio and Intelligence Battalions of each MEF.

***QDR Operational Goal(s):** 2

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$55.210 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	2900	5600	4844	4911	5164	5181
PMC	0	0	0	2076	4621	4826	4772	5034
RDTEMC	0	0	0	1124	1077	1000	1057	1030

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance:

Numerous intelligence systems (i.e., systems such as the Joint Worldwide Intelligence System (JWICS), Imagery Product Library (IPL), Channel ELM) were provided to the Marine Corps without program lines; this acerbates their technology refreshment, limits their supportability and inhibits intelligence capabilities and functionality. ISR will address the sparing, supportability, deployability and refreshment concerns.

IOC: N/A

FOC: N/A

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Program: 110702--JOINT TACTICAL RADIO SYSTEM (JTRS)

System Description: JTRS is the next generation radio systems to provide improved operational capabilities while leveraging modern technologies to resolve interoperability and lifecycle cost issues. The functional capabilities of today's radios are provided via software. JTRS will meet emerging needs for secure, multi-band/multi-mode digital radios for Expeditionary Maneuver Warfare (EMW). The JTR family will be scaled for use in all environmental domains (e.g., airborne, ground, mobile, fixed station, maritime, personal communication) and will share a common communications system architecture. The JTRS acquisition strategy will be evolutionary in nature with the Cluster 1 (vehicular) variant as the initial core capability to be fielded. The JTRS design is modular in structure and contains provisions for future upgrades as the software waveforms are refined.

***QDR Operational Goal(s):** 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$385.513 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC			2124	2446	3569	3837	5449	6049
OMMCR	0	0	65	40	40	175	170	100
PMC	0	0	14210	33797	33254	93100	82682	75130
RDTE		597	8467	9054	4348	3982	1672	1753

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: JTRS is a software-programmable and hardware-configurable digital radio system is required to provide increased interoperability, flexibility, and adaptability to support the varied mission requirements of the warfighters. The JTR System lays the foundation for achieving network connectivity across the radio frequency (RF) spectrum and provides the means for digital information exchanges, both vertically and horizontally, between Joint warfighting elements, while enabling connectivity to civil and national authorities. JTRS is the next generation radio systems to provide improved operational capabilities while leveraging modern technologies to resolve interoperability and lifecycle cost issues. The functional capabilities of today's radios are provided via software. JTRS will meet emerging needs for secure, multi-band/multi-mode digital radios for Expeditionary Maneuver Warfare (EMW). The JTR family will be scaled for use in all environmental domains (e.g., airborne, ground, mobile, fixed station, maritime, personal communication) and will share a common communications system architecture. The JTRS acquisition strategy will be evolutionary in nature with the Cluster 1 (vehicular) variant as the initial core capability to be fielded. The JTRS design is modular in structure and contains provisions for future upgrades as the software waveforms are refined.

IOC: FY08

FOC: FY20

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Program: 110302--JOINT NETWORK MANAGEMENT SYSTEM (JNMS)

System Description: The JNMS is a CINC and Commander, Joint Forces (CJF), joint communications planning and management system. It provides communication planners with the capabilities to conduct high level planning (war planning); detailed planning and engineering; monitoring; control and reconfiguration; spectrum planning and management; and security of systems and networks supporting joint operations.

***QDR Operational Goal(s):** 2, 4, 5, 6

****Joint Warfighting Priorities:** 1, 2, 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$34.060 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC			1170	2534	2664	2561	2363	2358
OMMCR	0	0	0	55	405	406	360	360
PMC	0	0	5845	5290	1297	1050	650	0
RDTE	944	1101	1170	1071	881	859	680	31

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: Yes

Joint Relevance: Provides a standard, interoperable communications planning and network management system for the CINC, CJTF and Service components of a Joint Task Force (JTF). Its mission is to facilitate and collaborate high-level communications planning (war planning).

IOC: FY04

FOC: FY08

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6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 115104--LEGACY COMMUNICATIONS/ELECTRONICS SYSTEMS

System Description: The Legacy Comm/Elect Mods enable the USMC to provide post production sustainment of fielded tactical communications and networking systems and service life extension programs (SLEP) of aging communications equipment reaching the end of there lifecycle. The post production sustainment provides necessary engineering and logistic support to maintain the existing operational capability above threshold operational readiness.

***QDR Operational Goal(s):** 3

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$47.049 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	0	0	790	875	890	785
PMC	0	0	473	4272	8072	11472	10400	6800
RDTEMC	0	0	0	0	800	620	800	0

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: Provides sustainment and necessary engineering and logistic support to maintain the existing operational capability above threshold operational readiness for TRC-170, PSC-5, etc.

IOC: FY07

FOC: FY09

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 211101--LIGHT ARMORED VEHICLE C2 UPGRADE (LAV C2)

System Description: LAV C2 is a tactical command and control vehicle that provides the necessary voice and data connectivity to intelligence, fire support and maneuver agencies in support of the Light Armored Reconnaissance Battalion. The LAV C2 upgrade will seek to meet, maintain and improve the command and control requirements of the ORD. This program will provide a hardware and software module (Universal Communication Interface Module-UCIM) capable of supporting complex, heterogeneous radio configurations. This module will support a mix of legacy radio and the Joint Tactical Radio System.

***QDR Operational Goal(s):** 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$72.181 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
PMC	0	0	0	0	0	27463	24665	2320
RDTEMC	0	0	0	9001	5920	2561	251	0

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: The C2 LAV supports the use of TDN, DACT, AFATDS, IAS, TCO, and mobile SATCOM. IT receives data from JSTARS, UAVs, and UGV sensor platforms. (Blue Force Tracking, Red Force Tracking, Fires, Tactical Infrastructure)

IOC: FY05

FOC: FY08

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

**Program: 122198--MANPACKABLE SECONDARY IMAGERY DISSEMINATION SYSTEMS
(MP SIDS)**

System Description: MP SIDS is a manpackable, digital imagery collection/transmission system. The currently fielded version of MP SIDS has proven obsolete and is in the process of being refreshed. The refreshed system is comprised of three sets of outstation equipment and one set of basestation equipment. The refreshed outstation suites each consist of one (1) COTS digital camera, one (1) night vision intensifier tube, one (1) rugged handheld computer with data controller hardware/software, and a set of fixed and telephoto lenses.

***QDR Operational Goal(s):** 2, 4, 6

****Joint Warfighting Priorities:** 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$16.392 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	577	677	640	645	651	654
OMMCR	0	0	17	24	15	17	24	15
PMC	0	0	1064	2862	1713	1715	1768	1723
RDTE	0	0	245	253	262	269	278	284

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: Red Force Tracking

IOC: FY02

FOC: FY03

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 507704—MAGTF C4I PORTFOLIO

System Description: Command, Control, Communications and Computers (C4) Program is mission critical in providing both telephone and data communications for the Operating Forces. Without software maintenance for all systems, critical communications links fail to be established and maintained. This portfolio includes the Defense Message System (DMS), Digital Technical Control (DTC), and Unit Level Circuit Switch (ULCS).

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$39.468 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	6464	6084	6371	6503	6844	7202

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS, FIOP

Task 2

Joint Program: No

Joint Relevance: COE/NCES

IOC: N/A

FOC: N/A

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for “reachback” and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 110898—MARINE COMMON HARDWARE SUITE (MCHS)

System Description: The MCHS is a level of effort program that provides acquisition of workstations, both laptop and desktop systems; and file/application servers, including entry-level, department, and enterprise servers for the MCEN that support both Unix (RISC) and Intel (CISC) base applications. All MCHS equipment is procured via existing BPAs, IDIQs, and GSA schedules.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$527.218 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	0	0	2998	1089	1016	960
PMC	30795	38974	56514	70198	82724	99093	100230	102782
RDTEMC	1666	1538	1798	1581	1510	1544	1575	1606

IS JWCA Recommended Capability: COE/NCES, GCCS, C4 Infrastructure, FIOP Task 2

Joint Program: No

Joint Relevance: Tactical Infrastructure. MCHS as a whole is not a Joint Program. However, there are individual USMC programs that use MCHS hardware that are Joint Programs. MCHS centralizes USMC-wide procurement of workstations, laptops, & file application servers for Tactical / Functional programs. This standardizes Marine Corps enterprise IT infrastructure with standard configurations, configuration control and interoperability.

IOC: N/A

FOC: N/A

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

**Program: 670004—MARINE INFORMATION TECHNOLOGY NETWORK OPERATIONS
CENTER (MITNOC)**

System Description: MITNOC maintains a worldwide Common Operational Picture for all network comm via coordinated efforts with multiple DoD services and agencies; to include ISF for NMCI. From the COP status, mandated actions are enacted to run and defend the worldwide network. MITNOC is a single point of failure. The Alt Network Operations Center will ensure a backup COP capability. Analogous to a Combat Operations Center. Requires switches, routers, NT & UNIX servers, load balancers, firewalls, detection arrays, and Virtual Private Network equipment.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 2, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$97.1 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	7452	5322	9898	10027	8815	10494	10965	12684
PMC	0	0	6532	3257	5789	8781	3673	6185

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: Infrastructure, Blue Force Tracking, Red Force Tracking, Planning

IOC: N/A

FOC: N/A

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 111498—LIGHTWEIGHT, MULTI-BAND SATELLITE (LMST) PIP

System Description: The LMST PIP is a full duplex Ka-band upgrade to the LMST. The LMST is a transit case SHF wideband satellite communications terminal that provides military X, commercial C, Ku-band, and commercial/military ka-band voice, data and video over-the-horizon "reach-back" communications.

***QDR Operational Goal(s):** 2, 3, 5, 6

****Joint Warfighting Priorities:** 1, 2, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$25.622 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC		0	445	550	1510	1505	2159	3713
OMMCR	0	0	0	0	0	40	40	10
PMC		993	0	5250	290	90	6442	1382
RDTE			810	0	0	0	590	796

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: The LMST PIP will upgrade the tri-band SHF wideband terminal to full duplex Ka-band to take advantage of the Wideband Gapfiller satellite capabilities and to keep the USMC interoperable with the joint service community.

IOC: FY05

FOC: FY06

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 501802--PUBLIC KEY INFRASTRUCTURE (PKI)

System Description: Per DepSecDef Memorandum dated 6 May 1999, implementation of PKI throughout the Services is mandated. PKI provides confidentiality, authentication, data integrity, and non-repudiation as part of an overall approach to network security. Implementation requires hardware, software, and personnel to implement, operate, and maintain the system.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$33.669 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	7462	6148	5082	5336	5602	5883	5883	5883

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: Mandated DoD program provides network security through confidentiality, authentication, data integrity, and non-repudiation. Required to interoperate with other Services also using PKI. Required for DMS.

IOC: FY01

FOC: FY04

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 350404--SINGLE INTEGRATED AIR PICTURE (SIAP)

System Description: SIAP is a joint program that seeks to produce a fused, common, continual, unambiguous track of airborne objects in a surveillance area. The Marine Corps portion of this includes funding to ensure interoperability with Service and Joint level C2 systems developed as a result of the SIAP program.

***QDR Operational Goal(s):** 3, 4, 5, 6

****Joint Warfighting Priorities:** 1, 2, 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$54.0 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
RDTEMC	0	11400	9000	9000	9000	9000	9000	9000

IS JWCA Recommended Capability: SIAP

Joint Program: Yes

Joint Relevance: SIAP is a joint program that seeks to produce a fused, common, continual, unambiguous track of airborne objects in a surveillance area. The Marine Corps portion of this includes funding to ensure interoperability with Service and Joint level C2 systems developed as a result of the SIAP program.

IOC:

FOC:

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 501502—SMART CARD TECHNOLOGY

System Description: The Smart Card Technology (SCT) program is an information technology program that includes software application development, business process re-engineering, smart cards, computer hardware and telecommunications infrastructure. Identical in size and feel to credit cards, smart cards store information on an integrated microprocessor chip located within the body of the card. These chips hold a variety of information, from stored(monetary)-value used for financial transactions, to secure information and applications for higher-end operations such as medical and personnel records. Smart cards may also contain a magnetic stripe and a standard bar code.

***QDR Operational Goal(s): 2**

****Joint Warfighting Priorities: 1**

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$9.6M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	2000	1300	1500	1800	1600	1700	1700

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance:

IOC:

FOC: FY04

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 119198--Tactical Data Network (TDN)

System Description: TDN augments the existing MAGTF communications infrastructure to provide the MAGTF commander an integrated data network, forming the communications backbone for MAGTF tactical data systems and the Defense Messaging System (DMS). The TDN system consists of a network of gateways and servers interconnected with one another and their subscribers via a combination of common user long-haul transmission systems, local area networks, and switched telephone systems.

***QDR Operational Goal(s):** 1, 2, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$109.853 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC		0	0	0	355	787	1832	1773
OMMCR	0	0	0	0	0	100	100	100
PMC			2354	1125	5587	57137	34752	150
RDTE	0	0	0	0	1175	931	942	653

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: N

Joint Relevance: Provides the MAGTF commander an integrated data network, forming the communications backbone for MAGTF tactical data systems and Defense Message System (DMS). It is JTA and DIICOE compliant and inteoperable with other service and agency data networks. Provides tactical connectivity to NIPRNET and SIPRNET. 447 DDSs contracted, 631 is the current AAO

IOC: FY01

FOC: FY03

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 121198—TACTICAL REMOTE SENSOR SYSTEM (TRSS)

System Description: The TRSS provides the capability for remote surveillance of an Amphibious Objective Area (AOA) or other Areas of Operation (AO) using unattended hand-emplaced and air-delivered sensors. Data collected by remote sensors are communicated to TRSS monitoring and sensor control equipment where it is further processed and used in support of the Marine Air Ground Task Force (MAGTF) Commander's intelligence collection effort.

***QDR Operational Goal(s):** 1, 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$123.2 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	745	815	716	827	861	919	1403	1447
OMMCR	0	20	50	55	65	60	65	65
PMC	321	5846	9871	13470	20705	19366	16960	14288
RDTE	3401	4347	2865	7632	7118	2254	1074	1064

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: Hand-emplaced and air-delivered unattended sensors, ground and airborne relays, and sensor monitoring stations which are used by the MEF to monitor activity within given areas which are passed to the IAS (Red Force Tracking, Planning).

IOC: FY92

FOC: FY07

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 111498—TACTICAL SATELLITE COMMUNICATIONS TERMINAL/SUPER HIGH FREQUENCY (SHF)/WIDEBAND SHF

System Description: The SHF Wideband Satellite Communications terminal will provide joint service interoperability in support of Joint Task Forces and MAGTFs as a "first in" communications resource across the entire spectrum of conflict. The SHF Wideband Satellite Communications terminal provides the tactical users the capability for satellite transmission of baseband signals at Marine unit HQ for termination at other Marine unit HQ, DISN STEP sites, naval vessels, other service HQ, a JTF HQ, or elements of a JTF HQ.

***QDR Operational Goal(s):** 2, 3, 6

****Joint Warfighting Priorities:** 1, 2, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$25.622M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC		0	445	550	1510	1505	2159	3713
OMMCR	0	0	0	0	0	40	40	10
PMC		993	0	5250	290	90	6442	1382
RDTE			810	0	0	0	590	796

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: Tactical Infrastructure. The SHF Wideband Satellite Communications terminal will provide joint service interoperability in support of Joint Task Forces and MAGTFs.

IOC:

FOC:

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 121498—TEAM PORTABLE COMINT SYSTEM (TPCS) – MPC

System Description: The TPCS-MPC will provide the MAGTF commander with a modular and scaleable carry on/carry off suite of equipment capable of conducting SIGINT operations onboard organic non-dedicated Marine Corps air, ground, and water borne platforms. The TPCS-MPC will be a highly modular, mission configurable, multi-platform system incorporating plug-and-play technologies. The system will provide state-of-the-art, versatile air/ground/water borne SIGINT and EW support to the MAGTF through the use of lightweight, flexible mission equipment suites capable of detecting, identifying, locating, and exploiting current and emerging communications technologies, intercepting non-communication signals, and improving the system's geolocation accuracy.

***QDR Operational Goal(s):** 2, 3, 4, 5

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$52.616 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	443	1603	1441	1286	1289	1142
PMC	0	0	0	7446	8553	8195	6305	275
RDTE	5070	2935	0	3403	2761	3780	3054	1640

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: Tactical Infrastructure. The TPCS-MPC will be a mission configurable, multi-platform SIGINT collection system incorporating plug-and-play technologies that provides the marine air ground task force (MAGTF) commander with a modular and scaleable carry-on/carry-off equipment capability for operations onboard non-dedicated air, ground, and waterborne platforms. The TPCS-MPC will significantly extend the radio horizon and increase support to the tactical commander

IOC: FY05

FOC: FY20

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 120698—TECHNICAL CONTROL AND ANALYSIS CENTER (TCAC) PIP

System Description: The TCAC PIP is the focal point for Radio Battalion SIGINT operations. The TCAC PIP provides an enhanced automated signals intelligence processing, analysis, and reporting capability that allows RadBns to provide timely, accurate intelligence products to the MAFTG Commander. In addition, the system improves RadBn control and management of SIGINT/EW assets.

***QDR Operational Goal(s):** 2, 3, 4, 5

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$20.307 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	1321	1280	1335	1284	1585	1538
PMC	837	977	345	1545	945	945	945	1145
RDTE	0	0	944	954	964	974	1133	1145

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: Infrastructure

IOC: N/A

FOC: N/A

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 461204—TRAINING SUPPORT TDN/DTC

System Description: Marine Corps Communications-Electronics School (MCCES) has identified a \$3.454M resource shortfall in support of training for the TDN and DTC systems. The \$3.454M is based on \$2.25M for 30 TDN servers and \$1.204M for additional equipment requirements for the DTC. This deficiency must be met to ensure that training for both systems will begin by October 02. Additionally, in O&M funds, the school will require an estimated \$25K annually for supplemental training and consumables and an estimated \$250K annually for maintenance support and post deployment software support.

***QDR Operational Goal(s):** 1, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$30.175 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
PMC	0	0	0	0	0	375	0	0
OMMC	0	0	0	5300	5600	5900	6300	6700

IS JWCA Recommended Capability: C4 Infrastructure, GCCS, COE/NCES

Joint Program: No

Joint Relevance:

IOC: Schoolhouse training begins in FY03

FOC: N/A

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 110096--TRANSITION SWITCH MODULES (TSM.ULCS)

System Description: The ULCS is a family of Tri-Service Tactical Communications (TRI-TAC) digital voice switching equipment consisting of the AN/TTC-42, SB-3865, and various ancillary equipment that provide automatic secure telephone capability to the field. The ULCS PIP will upgrade the AN/TTC-42 and SB-3865 circuit switches through the installation of special purpose circuit card assemblies. The new circuit card assemblies will provide improved access to fixed plant analog and DSN trunk connections, commercial access, and STU-III telephone connections directly to the SB-3865 and the AN/TTC-42.

***QDR Operational Goal(s):** 1,6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$226.406 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC			1259	3518	5555	9300	9162	1874
OMMCR	0	0	0	0	0	87	93	0
PMC	0	0	25829	41073	58537	54364	5013	3123
RDTE	0	3665	1024	1733	1745	1198	948	971

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: The Transition Switch Module will provide a flexible Unit Level Switch capability that bridges legacy Tri-Tac switches with current commercial technology. This program will maintain USMC joint interoperability as the other Services transition to COTS switching technologies.

IOC: FY05

FOC: FY08

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 120398--TROJAN SPIRIT LITE

System Description: TROJAN LITE is an SHF dual band multichannel satellite communications terminal utilizing a 2.4 meter antenna. The entire system is packaged in nine transit cases, with a total weight of 1400 pounds and volume of 103 cubic feet. It is easily transportable via HMMWV or any vehicle with at least a 1400 pound payload capacity. It is also easily transportable as commercial air cargo. The system would provide a more easily transportable TROJAN system and provide new capability to certain intelligence sections that do not currently have access to the TROJAN network due to a shortage of TROJAN SPIRIT II systems. The current TROJAN SPIRIT II terminals are HMMWV mounted and are more difficult to move ashore.

***QDR Operational Goal(s):** 1, 2, 5, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$17.891 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	1436	1412	1400	1438	1478	1518
PMC			413	5496	1900	400	500	500

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: The TROJAN SPIRIT provides Marine Corps Commanders dedicated secure, mobile, data and voice communications that can receive, transmit and disseminate bulk data and imagery products from and to national and tactical intelligence sources.

IOC: FY02

FOC: FY05

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 115198--UNIT OPERATIONS CENTER (UOC)

System Description: The UOC is comprised of the Combat Centers (CCs) and Combat Operation Center (COC). The COC will provide a centralized facility to host Command and Control (C2) functionality for the CE, GCE, ACE and the CSSE. The COC is scalable and supports command echelons for battalion and above. The present procurement objective is concentrating on the CE and GCE. It will provide shelter/tentage, power, cabling, LAN and processing systems to best mission application software. COC will support information exchange during OMFTS, SOA and OEO to enable interaction and flow of information between staff members. The COC will move the UOC program from Milestone I through the Program Definition and Risk Reduction phase to Milestone II and commencement of the Engineering and Manufacturing Definition Phase. The UOC program will be an evolutionary acquisition process for developing and fielding CE, GCE, ACE and CSSE components.

***QDR Operational Goal(s):** 1, 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$690.186 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC		29	2286	4444	3917	9698	9188	19180
OMMCR	0	0	0	786	845	3008	3628	4748
PMC	0	23108	29873	36860	42290	127715	155844	151465
RDTE	9772	2414	11562	14736	16369	23645	11232	6867

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: No

Joint Relevance: Standardized tactical operational facility designed to encompass current and future tactical as well as strategic data systems thereby enhancing C2 situational awareness and MAGTF / JTF C2 Interoperability. UOC provides enhanced C4 Infrastructure in support of all five remaining Major Capability Areas.

IOC: FY04

FOC: FY09

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 670210 Information Assurance

System Description: Resources that provide for information operations; protection and defense of vital information and responses to information warfare. Includes but not limited to: hacker defense, ensuring data integrity, monitoring network traffic. Major funding categories are; HQMC Policy & Reporting, Network Engineering & Upgrades, Deployed Support, General Maintenance, Training, Travel.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$34.206M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	6050	5367	5343	6364	5481	5602

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance:

IOC: N/A

FOC: N/A

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 111298 GLOBAL BROADCAST SYSTEM (GBS)

System Description: The Global Broadcast Service (GBS) provides a worldwide, high capacity, one-way transmission of video, imagery, and other information as required to support joint military forces in garrison, in transit, and in theater. The GBS system will broadcast via communication payloads on a constellation of DoD satellites augmented by leased commercial satellite services. Information (data and video) is collected, organized, and fed to the satellite uplink by fixed or transportable injection points. The USMC is to receive 10 Joint Program Office LRIP Receive Suites (RS) for evaluation and concept of operations development prior to full fielding. The USMC will procure 100 production units I FY04 (50 units) and FY05 (50 units).

***QDR Operational Goal(s):** 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$25.6 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC (N)		0	0	500	1400	1800	1800	0
OMMCR	0	0	0	0	100	200	0	0
PMC (N)			9900	9900				
RDTEMC	1084	0	0	0	0	0	0	0

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: GBS will support, crisis, situational awareness, weapons targeting, reconnaissance, and the transition to and conduct of opposed operations short of nuclear war. The overall GBS system provides near worldwide, high data rate, one-way dissemination of large information products such as classified and unclassified imagery and video, theater message traffic, joint and service-unique news, weather and MWR programming to deployed or garrison forces via small user platforms.

IOC: FY04

FOC: FY06

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 118398--DATA AUTOMATED COMMUNICATIONS TERMINAL (DACT)

System Description: The DACT is a tactical input and output battlefield situational awareness system and communication terminal acquired to provided a digitization capability below the battalion level. The DACT is one of the overall digitization elements of the battlefield for Marine Air-Ground Task Force. It will integrate information from all six Command and Control (C2) functional areas (maneuver, fire support, intelligence, air operations, combat service support, and C2 warfare). The DACT is transportable by foot mobile Marines and mountable in tactical/armored vehicles.

***QDR Operational Goal(s):** 3, 4, 6

****Joint Warfighting Priorities:** 1, 2

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$10.941 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
PMC	8227	6430	4280	300	300	200	300	300
RDTE	1372	3961	1370	1201	778	686	604	622

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: Yes

Joint Relevance: Feeds critical C2 systems GCCS, IOS, IAS, IOW, and will be the foundation upon which the MAGTF commander's COP will be built. Used to receive, store, retrieve, create, modify, transmit, and display map overlays and commander's critical information via tactical radios or tactical data networks (tactical infrastructure, fires, planning, Blue Force Tracking, Red Force Tracking). The DACT is a tactical input and output battlefield situational awareness system and communication terminal acquired to provided a digitization capability below the battalion level. The DACT is one of the overall digitization elements of the battlefield for Marine Air-Ground Task Force. It will integrate information from all six Command and Control (C2) functional areas (maneuver, fire support, intelligence, air operations, combat service support, and C2 warfare). The DACT is transportable by foot mobile Marines and mountable in tactical/armored vehicles.

IOC: FY03

FOC: FY05

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 111398--GLOBAL COMMAND AND CONTROL SYSTEM (GCCS)

System Description: The Global Command and Control System (GCCS) is an intermediate step to establishing a joint Command, Control, Communication, Computing, and Intelligence Surveillance Reconnaissance (C4ISR) system to provide total battle space information to the warrior. It is a distributed client-server based architecture that incorporates a Common Operating Environment (COE) infrastructure with interfaces that support the hosting and execution of heterogeneous applications. Mandated by the JCS, this architecture has been designed, developed, and fielded not as a single system, but through periodic accretions of functionality and capability since 1994. The program follows an evolutionary acquisition plan.

***QDR Operational Goal(s):** 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$42.602 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	2484	2583	2295	3173	3043	2736	2791	2847
OMMCR	0	344	0	0	0	0	0	0
PMC	5402	3974	4154	3908	4232	4346	4494	4583

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: Yes

Joint Relevance: The Global Command and Control System (GCCS) establishes a joint Command, Control, Communication, Computing, and Intelligence Surveillance Reconnaissance (C4ISR) system to provide total battle space information to the warrior.(Planning, Blue Force Tracking, Red Force Tracking, Fires, Infrsatructure)

IOC: FY95

FOC: FY96

*QDR Operational Goals:

- 1.Protecting critical bases of operation
- 2.Information assurance and effective IO
- 3.Projecting and sustaining US forces in distant anti-access or area denial environments
- 4.Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
- 5.Enhancing the capability and survivability of space systems
- 6.Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for “reachback” and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 111102—GLOBAL COMBAT SUPPORT SYSTEM (GCSS)

SYSTEM DESCRIPTION: The GCSS-MC is an overall initiative to modernize and transform Marine Corps logistics information systems. GCSS-MC is the IT solution that will satisfy the requirements promulgated from the Integrated Logistics Capability (ILC) effort and the GCSS Capstone Requirements Document. GCSS-MC is submitted in the POM-04 process as a Portfolio of new initiatives and logistics IT above core requests. The five new initiatives are: The Warfighter Portal, Autonomic Logistics, Legacy System Modernization, CSS Decision Support Toolkit, and the Combat Engineering Toolkit. The above core segment of the portfolio consists of ATLASS II+, TCAIMS II, and MCDSS. This portfolio approach will ensure an enterprise view of logistics information technology and eliminate stovepipes and redundancy.

***QDR Operational Goal(s):** 6

****Joint Warfighting Priorities:** 1, 2, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$149.885 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	228	9420	11936	9605	9293	8287	8723
OMMCR	0	0	324	332	341	117	120	123
PMC	0	0	8418	8960	4464	1173	875	412
RDTE	0	0	21594	16091	8959	6588	6796	6934

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: No

Joint Relevance: Provides information interoperability across combat support functions and between combat support and command and control functions in support of the joint war fighter. GCSS provides a fused, multi-dimensional view of military operations and the ability to coordinate upward, laterally, and downward through all echelons. (Blue Force Tracking, Planning)

IOC: FY04

FOC: FY06

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

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**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 118898--TACTICAL COMBAT OPERATIONS SYSTEM (TCO)

System Description: The TCO system is comprised of MAGTF C4I Software Baseline (MSBL) hosted on commercial hardware. TCO will serve as the operations component to the MAGTF C4I Baseline. TCO will use COTs Servers and Workstations to provide commanders the automation to receive, fuse, select, and display information from many sources, and disseminate selected information throughout the battlefield.

***QDR Operational Goal(s):** 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$8.554 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	1283	958	679	216	220	224
RDTE	1197	1064	785	811	910	733	756	979

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: No

Joint Relevance: TCO provides unit commanders with automated message processing, mission planning, development and dissemination of operation orders and overlays, display of current friendly and enemy situations, display of tactical control measures, and interface with local and wide area networks. JI&I effort in FY-02 funded interoperability fix between TCO and Army MCS.(GCCS/DIICOE)

IOC: FY96

FOC: FY98

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

**Program: 120798--JOINT SURVEILLANCE TARGET ATTACK RADAR SYSTEM AAO
BUYOUT (JSTARS)**

System Description: The Joint Surveillance Target Attack Radar System (JSTARS) is a joint, Acquisition Category I, Defense Acquisition Board approval (ACAT ID), program. The system consists of two major segments, airborne and ground. The U.S. Air Force is the lead service for the airborne segment, a refurbished 707 airframe, designated the E-8C, with a unique JSTARS payload. The U.S. Army is the lead service for the ground segment, which is called the Joint STARS Common Ground Station (CGS), and is designated the AN/TSQ-179.

***QDR Operational Goal(s):** 1, 2, 3, 4, 6

****Joint Warfighting Priorities:** 1, 2, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$28.832 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	0	0	1254	1241	689	824	0	0
PMC	1711	265	3461	5853	4969	85	5000	1500
RDTE	1066	785	590	788	589	389	800	800

IS JWCA Recommended Capability: COE/NCES

Joint Program: Yes

Joint Relevance: Receive, process, display Moving Target Indicator, (MTI), Synthetic Aperture Radar (SAR) and Fixed Target Indicator (FTI) data received from JSTARS E8

IOC: FY02

FOC: FY04

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

**Program: 121898--JOINT SERVICE IMAGERY PROCESSING SYSTEM (JSIPS)/TACTICAL
EXPLOITATION GROUP (TEG) PRODUCT IMPROVEMENT PROGRAM (PIP)**

System Description: The TEG is a highly mobile imagery ground station designed to process tactical imagery in support of the MAGTF commander. The system is an integral component of the Joint Service Imagery Processing System (JSIPS), complementing the capabilities of the JSIPS National Input Segment (NIS) located at Camp Pendleton. Initially, the system will provide the capability to receive, process, store, exploit, and disseminate Advanced Tactical Air Reconnaissance System (ATARS) electro-optical, infrared, and synthetic aperture radar imagery from the F/A-18D and receive national secondary imagery from the NIS.

***QDR Operational Goal(s):** 4, 6

****Joint Warfighting Priorities:** 1, 2, 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$52.104 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	4130	4340	5426	5648	5672	5800	5881	5968
PMC	5035	2953	2912	619	0	0	0	0
RDTE	1792	2314	2350	2355	2299	2344	2391	2439

IS JWCA Recommended Capability: COE/NCES

Joint Program: Yes

Joint Relevance: The system will provide the capability to receive, process, store, exploit, and disseminate Advanced Tactical Air Reconnaissance System (ATARS) electro-optical, infrared, and synthetic aperture radar imagery from the F/A-18 and receive national secondary imagery from the NIS. Imagery can be received and processed in near real time via the Tactical Interoperable Ground Data Link (TIGDL) Common Data Link (CDL) or from tape recorded aboard the collection platform.

IOC: FY02

FOC: FY06

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 240198--ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM (AFATDS)

System Description: The Advanced Field Artillery Tactical Data System (AFATDS) is an automated fire support command and control (C2) system that provides Marine Air-Ground Task Forces with the ability to rapidly integrate all supporting arms assets into maneuver plans via a digital communications link. AFATDS replaces the Initial Fire Support Automated Systems (IFSAS), and the Battery Computer System (BCS), while adding additional fire support capabilities and providing a more robust hardware platform. Additionally, AFATDS is a Joint fire support system utilized by both the US Army and US Marine Corps, thereby providing for digital fire support interoperability between the two services.

***QDR Operational Goal(s):** 1, 4, 6

****Joint Warfighting Priorities:** 1, 2, 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$42.293 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	179	0	353	624	993	847	805	885
PMC	2645	0	700	200	4470	8486	9368	3327
RDTE	2188	1877	210	210	4610	2860	1625	1720

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES

Joint Program: Yes

Joint Relevance: AFATDS is a multi-service endeavor that provides automated fires support command and control. It automates the fire planning, tactical fire direction, and fire support coordination.

IOC: FY00

FOC: FY03

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 321398 AN/TPS-59 SLEP - THREE DIMENSIONAL LONG RANGE RADAR

System Description: The 3-D long range radar is the MAGTF's primary means of detecting, identifying, tracking, and reporting on all aircraft and missiles within the MAGTF's area of responsibility. The radar must provide the Marine Air Command and Control System (MACCS) with a real-time display of all air activity and must be rugged, highly mobile, and flexible enough to support a wide range of tactical operations in all types of weather and terrain conditions.

***QDR Operational Goal(s):** 1, 3

****Joint Warfighting Priorities:** 3

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$267.504 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
OMMC	750	750	3054	3652	3671	3020	2987	3886
PMC	5298	4323	18678	25148	7740	12327	39981	51869
RDTE	4729	2569	10917	23277	26376	21895	5039	3987

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES

Joint Program: No

Joint Relevance:

IOC: FY08

FOC: FY13

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 801000--JOINT INTEROPERABILITY OF TACTICAL COMMAND AND CONTROL SYSTEMS (JINTACCS)

System Description: JINTACCS is a Joint Chiefs-of-Staff (JCS) – mandated program for joint development, implementation, and testing of data links under the direction of the Joint Interoperability Engineering Organization.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 1, 2

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$9.939 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
RDTE	1648	1744	1781	1818	1536	1570	1601	1633

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES

Joint Program: Yes

Joint Relevance: The JINTACCS program is a JCS-mandated research, development, test, and evaluation program to ensure interoperability among tactical command and control systems used in joint and combined military operations. The JINTACCS program supports the development and testing of joint and combined message standards to include U.S. Message Text Format (USMTF), Tactical Digital Information Links (TADILs) A/B/C/J, Interim JTIDS Message Specification (IJMS), Army Tactical Data Link (ATDL-1), and Variable Message Format (VMF).

IOC: N/A

FOC: N/A

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for “reachback” and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 802299—JOINT DISTRIBUTIVE ENGINEERING PLANT (JDEP)

System Description: The JDEP is a DoD mandated effort to evaluate the interoperability of current and soon-to-be fielded Family of Systems (FOS). The JDEP will assist in building and employing interoperable forces across multiple mission areas by providing a means for (1) developers to engineer interoperability into systems, (2) testers to test and evaluate interoperability among systems, and (3) warfighters to assess the operational capabilities of forces.

***QDR Operational Goal(s):** 2, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$9.223 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
RDTE	842	1044	1506	1652	1496	1498	1523	1548

IS JWCA Recommended Capability: COE/NCES

Joint Program: Yes

Joint Relevance:

IOC: N/A

FOC: N/A

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

2-42

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for “reachback” and other joint warfighting infrastructure capabilities

APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT PROGRAM (FYDP)

Program: 350198—THEATER BATTLE MANAGEMENT CORE SYSTEM (TBMCS)

System Description: TBMCS is the Chairman, Joint Chief's of Staff mandated air war planning tool for the generation, dissemination and execution of the Air Tasking Order. It is the replacement system for the Contingency Theater Automated Planning System (CTAPS), and provides the tools for the automation of airspace, air combat intel, mission planning and mission execution with the Marine Air Command and Control System (MACCS). It is a USAF ACAT 1AC program with Joint Interest/Oversight.

***QDR Operational Goal(s):** 1, 2, 3, 6

****Joint Warfighting Priorities:** 1, 4

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$30.103 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
PMC	3048	2435	6612	3484	3609	3702	3828	3904
RDTEMC	750	776	785	790	804	845	861	879

IS JWCA Recommended Capability: C4 Infrastructure, COE/NCES, GCCS

Joint Program: Yes

Joint Relevance: Planning. TBMCS is the Chairman, Joint Chief's of Staff mandated air war planning tool for the generation, dissemination and execution of the Air Tasking Order. It replaced Contingency Theater Automated Planning System (CTAPS).

IOC: N/A

FOC: N/A

*QDR Operational Goals:

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

**Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 800298--JOINT WARRIOR INTER-OPERABILITY DEMONSTRATION (JWID)

System Description: JWID is an annual warfighting demonstration aimed at identifying C4ISR technologies, which may potentially solve joint and combined force interoperability problems.

***QDR Operational Goal(s):** 6

****Joint Warfighting Priorities:** 1

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$7.552 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
RDTEMC	2563	1161	1172	1229	1248	1275	1301	1327

IS JWCA Recommended Capability: C4 Infrastructure

Joint Program: Yes

Joint Relevance: Infrastructure

IOC: N/A

FOC: N/A

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

2-44

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities

**APPENDIX 2: COMMAND ELEMENT ADVOCATE PROGRAMS OF
RECORD WITHIN THE CURRENT FUTURE YEARS DEVELOPMENT
PROGRAM (FYDP)**

Program: 113904--MARINE CORPS TACTICAL IDENTIFICATION SYSTEM (MCTIS)

System Description: MCTIS will provide the capability to identify targets as friendly or unknown before engaging them. As a result, incidents of fratricide and collateral damage will decline, while the range at which targets may be engaged without fear of misidentification will increase dramatically. MCTIS will be compliant with STANAG 4579 and the CID Joint Capstone Requirements Document (CRD); and, as such, will employ "question and answer technology" and utilize the millimeter wave form.

***QDR Operational Goal(s): 6**

****Joint Warfighting Priorities: 1**

POM 04 C2 Interoperability Funding: Total FYDP Cost is \$24.425 M

APPN	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
PMC (N)	0	0	0	0	0	0	500	1530
RDTE(N)	0	0	2025	2400	3000	7000	7500	2500

IS JWCA Recommended Capability: C4 Infrastructure, FIOP, GCCS,

Joint Program: Yes

Joint Relevance: Provides Combat Identification and inputs to the Common Operational Picture for situation awareness, assists in BLUE FORCE TRACKING. MCTIS will be compliant with STANAG 4579 and the CID Joint Capstone Requirements Document (CRD).

IOC: FY08

FOC: FY12

***QDR Operational Goals:**

1. Protecting critical bases of operation
2. Information assurance and effective IO
3. Projecting and sustaining US forces in distant anti-access or area denial environments
4. Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement
5. Enhancing the capability and survivability of space systems
6. Leveraging information technology and innovative concepts to develop interoperable, joint C4ISR architecture and capability

2-45

****Joint Warfighting Priorities (Derived from several DPG-related sources by the IS JWCA):**

1. Interoperability at the JTF and component level including the SJF HQ
2. Shared common picture to the lowest level tactical levels
3. Establishment of viable, responsive sensor-to-shooter links that allow precise, timely, overwhelming application of joint combat power
4. Support for "reachback" and other joint warfighting infrastructure capabilities